

WHITE PAPER



USDA Forest Service

Pacific Northwest Region

Umatilla National Forest

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Big Tree Program

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The Umatilla National Forest participates in a national program to locate, measure, and recognize the largest individual trees of each species (this is the Big Tree Program). The nominator(s) of a big tree is recognized with a certificate and a non-monetary award, and a yellow placard is attached to the tree so others will know it is registered in the Umatilla National Forest's big-tree program.

National Big-Tree Program

An organization called American Forests (previously known as the American Forestry Association) has administered a national big-tree program since 1940. Every other year, American Forests publishes a National Register of Big Trees in a PDF format.

The national big-tree register is available from American Forests: [National Register](#). The national program includes many tree species, and 220 species did not have champions when the National Register was last published in 2012.

State Big-Tree Programs

Interest in big trees has grown steadily over the years. Many states, counties, and cities keep records of local champions, and forward contenders to the national program. Oregon has long had an active program; Washington had a period where they documented their champion trees (Van Pelt 1996), but there is no active Washington program that I am aware of.

Oregon's big-tree program is described at: [Oregon Register](#)

Washington's big-tree register is published in a book by Robert Van Pelt ("Champion trees of Washington state," 1996, University of Washington Press, Seattle WA; ISBN: 0-295-97563-6). To my knowledge, the Washington big-tree register is not available on the internet.

Umatilla National Forest Big-Tree Program

The Umatilla National Forest big-tree program was designed to address biological diversity concerns by locating and reserving (from timber harvest; this is a recommendation, not a re-

quirement) the largest examples of each tree species occurring on the Forest. It was also designed to be compatible with national and state programs.

The Umatilla National Forest initiated a big-tree program when Forest Supervisor Jim Lawrence approved a pilot project proposal in January of 1988. The program's first nominations did not occur until the 1989 field season, when 13 big-tree forms were submitted.

The Umatilla NF big-tree program includes 45 species – the national list was consulted, and every species in the national program occurring on the Forest was included in our list of qualifying trees, even those species that tend to grow as shrubs rather than trees in this area.

The Forest's plant guide, "A pocket checklist of vascular plants of the Umatilla National Forest of Oregon and Washington" (8th edition, 2012), was used to identify which of the national species occur on the Umatilla National Forest.

When a big-tree is added to the Forest's program, a yellow plastic placard is nailed to the tree at eye height or slightly higher, primarily so other employees know it is already in the program (figure 1).

Big Tree Size Range

A tree is defined as a woody plant with one erect perennial stem or trunk at least 9 and ½ inches in circumference (3 inches in diameter) at 4 and ½ feet above the ground (breast height), and possessing a definitely formed crown of foliage and a height of at least 13 feet. In contrast, shrubs are small woody plants, usually with several perennial stems arising from a common base (the root crown).

Using these specifications, the Umatilla National Forest's smallest champion tree is a casca-ra buckthorn measured in 2003 by Betsy Kaiser on the Walla Walla Ranger District (although my western serviceberry is close behind at 37 points). At 25 total points, the buckthorn is about 6% of the size of the Forest's biggest tree – a 75-inch, 200-foot grand fir last measured in 1996 by Jim Tardif and Dave Powell on the Pomeroy Ranger District (total score of 448 points).

State and National Champions on the Umatilla National Forest

The Umatilla National Forest currently has one national champion tree – a mountain alder on the Pomeroy Ranger District nominated by Slim Stillman in 1995.

Recently as a result of the "10-year rule," the status of many national champions was changed. (The 10-year rule requires that champion trees be verified at least every 10 years to ensure they are still living; trees that are not verified within this timeframe are dropped from the program). The 10-year rule changes result in three of our Forest champions apparently qualifying as new national champions: *bitter cherry*, *Rocky Mountain Douglas-fir*, and *grand fir* (in other words, our Forest champions are bigger than the national champions shown in the 2012 National Register). These trees should be visited and their measurements verified, and then they should be submitted to American Forests as soon as possible.

The Umatilla National Forest currently hosts several state champion trees – two in Washington (mountain alder and Rocky Mountain Douglas-fir) and two in Oregon (mountain alder and subalpine fir). As was the case for the National Register, there are several Forest champions that apparently qualify as new state champions, and they should be submitted to the state program as soon as possible.



Figure 1 – When a tree is added to the Forest’s big-tree program, a plastic sign is nailed to it (with aluminum nails) at eye height or slightly higher, primarily so other employees know it is already in the program.

Information about national and state champions (Oregon and Washington only for state champions) is included in the Forest’s Big Tree Register below. Note that not every species has an Oregon or Washington state champion, and the Washington information may be woefully obsolete since I was unable to locate any on-line information about Washington’s program (or even if they operate a state program now). If a tree species lacks an OC or WC entry in the Forest’s big-tree register (below), then an Oregon or Washington state champion is lacking for the species and, if we have a qualifying tree, then it could be submitted to the state program for consideration as a state champion.

Status of Umatilla National Forest Program

By the end of 2012, a total of 232 trees have been submitted during the 25 years of the program’s existence. *There are also 19 species that have no Forest nominations yet.*

When considering the number of trees that have been submitted over the past 25 years, the six most popular species in the Forest’s big-tree program are: quaking aspen (28 trees), Rocky Mountain Douglas-fir (19 trees), grand fir and western larch (16 trees each), and lodgepole and ponderosa pines (15 trees each).

If you would like to nominate a big tree, you’ll need to measure it carefully. If you lack the equipment or knowledge to do this correctly, please refer to a document called *How to Measure a Big Tree* (see the Useful Web Links section), or contact me and I’ll be happy to help you collect the tree measurements.

The Umatilla National Forest Big Tree Register is patterned after the national register: trees are organized alphabetically by common name (genus first, species second), and all plant names follow the American Forests program. Some plant names in the register may not agree with modern nomenclature contained in the national PLANTS database (and in the Umatilla National Forest's pocket checklist of plants), although this will change in the future because the national program recently decided to adopt the PLANTS database as its authority for plant names.

Note to Big-Tree Hunters: many employees can monitor the condition of trees they've submitted while completing field work. If you notice that one of your big trees has died, please notify me so its condition can be changed to "Dead" in the Register (dead trees are not dropped from the Register because they provide valuable monitoring information about potential tree size for species occurring on the Forest). Also, if you have photographs of your big trees, please consider sending them to me for inclusion on our big-tree website (I will scan and return them if not in a digital format).

Recognizing Participation in the Forest's Big-Tree Program

Individuals who nominate a tree for the Umatilla National Forest big-tree program qualify for a non-monetary award (but the tree must occur on National Forest System lands located within the Umatilla National Forest).

The most popular and long-standing award is a t-shirt. T-shirts are available in several colors: a deep forest green with white lettering and graphics, and a light-gray shirt with black lettering and multi-color graphics.

At least partly because t-shirts have been offered for so long (and because they tend to last a long time), we added a new non-monetary option in 2010 – color artwork sheets showing tree characteristics for seven species: quaking aspen, grand fir, Engelmann spruce, ponderosa pine, western white pine, western larch, and Douglas-fir. Each sheet is hand-colored, and individually numbered and signed by the artist. The artwork sheets have a nominal size of 11 inches by 16 inches and are suitable for framing (printed on heavy paper); they were taken from a new book called "Gymnosperms of the United States and Canada" by Elray S. Nixon and Bruce Lyndon Cunningham (isbn:978-0-934115-03-2). Either a t-shirt or an artwork sheet (one or the other) is available for any qualifying nomination to the Umatilla NF big-tree program.

Useful Web Links

- The **Umatilla NF Big Tree Register** (this white paper) can be found here: [Umatilla NF Register](#).
- A document called **How to Measure a Big Tree** (white paper F14-SO-WP-Silv-24) describes how to measure and score a big tree; it can be found here: [Measurement Document](#).
- A **Big Tree Nomination Form** for the Forest's big-tree program can be found here: [Nomination Form](#).

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
(INCLUDES 1989-2012 SUBMISSIONS)**

DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
ALDER, MOUNTAIN (ALNUS INCANA SSP. TENUIFOLIA)									
29.9	94	71	39	175	NC	Umatilla NF, WA		1995	Stillman
25.5	80	56	41	146	OC	Owens Creek, NFJD RD	Good	2000	McDonald
22.8	72	63	35	143	PM	NF Asotin/Horsethief	Good	1993	Stillman
17.1	54	72	34	134	PM	NF Asotin/Horsethief	Good	1993	Stillman
18.8	59	65	26	131	PM	NF Asotin/Horsethief	Fair	1993	Stillman
15.8	50	70	32	128	WW	Duncan Cabin	Good	2003	Collar/Powell
22.9	72	46	33	126	WW	Jarboe Creek	Good	2002	Collar
8.5	27	30	22	62	NF	EF Meadow Brook	Good	1993	McDonald
ALDER, RED (ALNUS RUBRA)									
91.6	288	87	100	400	NC	Golden Gate NRA, CA		2005	Ettlinger
80.0	245	104	49	361	OC	Clatsop County, OR			Simon
62.1	195	73	76	287	WC	Old Nisqually, WA		1990	Van Pelt
27.2	85	80	30	173	WW	Mill Creek	Fair	2001	Powell/Justice
19.0	60	70	20	135	WW	Tiger Creek	Good	1992	Grew/Roys
18.4	58	55	36	122	WW	Sheep Spring	Poor	1999	Mitchell/Meza/Ruiz
ALDER, SITKA (ALNUS IRIDIS SSP. SINUATA)									
10.5	33	30	39	73	NC	Maury Island, WA		1993	Lee
6.7	21	30	0	51	OC	Saddle Mtn. Park, OR			Drawson
ALDER, WHITE (ALNUS RHOMBIFOLIA)									
47.4	151	91	31	250	NC	Polk County, OR		1986	Drawson
47.4	151	91	31	250	OC	Polk County, OR		2009	Drawson
37.6	118	67	67	202	WC	Fort Walla Walla, WA		1990	Muse
16.1	51	112	21	168	WW	Buck Cr.; Kiwanis Cabin	Fair	2009	Justice
ASH, OREGON (FRAXINUS LATIFOLIA)									
90.7	285	81	74	385	NC	Multnomah County, OR		2007	French/Koomjian
90.7	285	81	74	385	OC	Multnomah County, OR		2007	French/Koomjian
73.6	231	68	55	313	WC	Beacon Rock State Park	Good	1990	Van Pelt
11.5	36	66	16	106	WW	Duncan Cabin/Camp Ck	Good	2001	Carson/Beekman
ASPEN, QUAKING (POPULUS TREMULOIDES)									
48.4	152	130	36	291	NC	Coronado NF, AZ		2007	Mike & Sylvia Hallen
38.3	120	136	42	267	OC	Lookingglass Creek	Dead	2001	Collar/Gomez
20.7	65	95	22	165	WC	Newport, WA		1995	Cross/Niemeyer
42.4	133	113	43	257	WW	Lookingglass Creek	Good	2001	Mitchells/Collar
36.0	113	130	40	253	WW	SE of Jarboe Meadow	Fair	2002	Helmstetler
34.8	109	117	40	236	WW	SE of Jarboe Meadow	Good	2002	Helmstetler
31.9	100	120	34	229	WW	Proctor Creek	Good	2000	Collar
33.4	105	108	41	223	WW	Proctor Creek	Good	2000	Collar
32.8	103	111	33	222	NF	Sugarbowl Creek	Good	2000	McDonald
34.2	107	102	30	217	NF	Sugarbowl Creek	Good	2000	McDonald

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35.3	111	94	42	215	WW	Elk Flat	Fair	1997	Collar
36.0	113	92	41	215	WW	Elk Flat	Poor	1997	Collar
29.4	92	109	32	209	WW	Proctor Creek	Fair	2000	Berlier
33.5	105	92	37	207	WW	Elk Flat	Good	1997	Collar
30.1	95	100	39	204	NF	Thompson Creek	Fair	1993	McDonald
33.2	104	91	36	204	NF	Thompson Creek	Fair	1993	McDonald
35.0	110	79	31	197	WW	South Edge Elk Flat	Poor	1996	Gaylord
26.6	84	103	32	195	HP	Long Prairie Area	Good	1993	Lacey
30.7	97	80	39	186	HP	Dry Swale Creek	Good	1993	Fritz
28.3	89	87	23	182	HP	Long Prairie	Good	1992	Fritz
33.0	104	65	44	180	WW	Fry Meadow	Good	1993	Vermey
32.2	101	68	37	178	WW	Jarboe Meadows	Poor	1994	Collar
29.3	92	78	31	178	HP	Dry Swale Creek	Good	1993	Fritz
31.4	99	66	32	173	WW	Fry Meadow	Good	1993	Vermey
30.5	96	66	36	171	WW	Fry Meadow	Good	1993	Vermey
29.8	94	68	35	170	WW	Swikert	Good	1992	Berlier/Busskohl
29.3	92	70	29	169	WW	Fry Meadow	Good	1993	Vermey
29.0	91	70	32	169	WW	Fry Meadow	Good	1993	Vermey
30.5	96	65	32	169	WW	Fry Meadow	Good	1993	Vermey
30.4	96	65	28	168	WW	Fry Meadow	Good	1993	Vermey

BIRCH, WATER (BETULA OCCIDENTALIS)

34.4	108	38	45	157	NC	Wallowa County, OR		2009	French
34.4	108	38	45	157	OC	Wallowa County, OR		2009	French
18.5	58	45	45	114	WC	Whitman College, WA		1993	Muse
25.8	81	51	38	142	WW	Lookingglass Creek	Fair	2011	Collar/Powell/Kaiser/Chi
23.7	75	52	54	140	PM	Tucannon River	Fair	1993	Slaybaugh/Lorentz
13.9	44	77	25	127	WW	Lookingglass Creek	Fair	2001	Mitchells/Collar
25.0	79	30	49	121	WW	Dry Creek	Good	1998	Berlier/Collar
16.6	52	58	25	116	WW	Dry Creek	Fair	1992	Berlier
16.8	53	45	21	103	WW	Dry Creek	Poor	1992	Berlier
11.1	35	57	29	99	WW	Umatilla Forks CG	Good	2000	Mitchell/Berlier
11.0	35	52	27	94	WW	Umatilla Forks CG	Good	2000	Mitchell/Berlier
9.2	29	55	28	91	WW	Umatilla Forks CG	Good	2000	Mitchell/Berlier
9.3	29	47	27	83	WW	Umatilla Forks CG	Good	2000	Mitchell/Berlier
10.3	32	34	19	71	WW	Umatilla Forks CG	Good	2000	Mitchell/Berlier

BOXELDER (ACER NEGUNDO)

82.8	260	76	67	353	NC	Washtenaw, MI		2009	Pomorski & others
47.4	149	69	95	242	WC	Walla Walla, WA		1990	Muse

BUCKTHORN, CASCARA (RHAMNUS PURSHIANA)

35.3	111	38	63	165	NC	Curry County, OR		2006	Miller
35.3	111	38	63	165	OC	Curry County, OR		2008	Miller

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10.8	34	70	20	109	WC	Blaine, WA		1988	Boettcher
2.0	6	17	9	25	WW	Thomas Creek	Fair	2003	Kaiser

CERCOCARPUS, CURLLEAF (CERCOCARPUS LEDIFOLIUS)

47.1	148	16	25	170	NC	Fishlake NF, UT		2008	Bonebrake & others
22.3	70	17	19	92	OC	Lake County, OR		1995	Corbet
19.7	62	21	23	89	NF	Potamus Point	Good	1993	McDonald
16.9	53	24	23	83	NF	Sharp Ridge	Good	1993	McDonald
14.7	46	19	48	77	PM	Smiley Ridge	Good	1993	Lydie
14.3	45	21	45	77	PM	Smiley Ridge	Good	1993	Lydie
12.0	38	35	16	77	PM	Smiley Ridge	Good	1992	Lydie
14.4	45	23	30	76	WW	S Wenaha-T Wilderness	Fair	2004	Denny/Hemstetler
14.0	44	21	17	69	WW	Big Hole Canyon	Fair	1994	Collar
9.6	30	19	31	57	PM	Smiley Ridge	Good	1993	Lydie
10.1	32	17	25	55	HP	Grassy Butte	Good	1993	Fritz
8.4	26	18	28	51	WW	Chase Mountain	Good	2010	Chi/Thomas
10.5	33	12	15	49	HP	Potamus	Good	1992	Michael/Winchcomb
8.6	27	15	24	48	HP	Tupper	Good	1992	Baker

CHERRY, BITTER (PRUNUS EMARGINATA)

6.0	19	22	15	45	NC	Coconino NF, AZ		2009	Thornburg/Allgood
22.9	72	66	44	149	OC	Tillamook County, OR		2001	Buchholz
5.8	18	45	14	67	WW	Duncan Cabin	Good	2003	Collar/Powell
4.3	14	22	14	40	WW	Goodman Ridge	Fair	1999	Kaiser

CHERRY, COMMON CHOKECHERRY (PRUNUS VIRGINIANA)

61.4	193	55	93	271	NC	Baltimore, MD		1991	F. and W. Rurka
15.6	49	60	17	113	OC	Clackamas County, OR		1994	Caldwell
12.4	39	41	31	88	WC	Fort Walla Walla, WA		1993	Muse

COTTONWOOD, BLACK (POPULUS BALSAMIFERA SSP. TRICHOCARPA)

108.9	348	154	93	525	NC	Marion County, OR		1982	Drawson
108.9	348	154	93	525	OC	Marion County, OR		2008	Drawson
104.7	329	137	79	486	WC	Sylvania, WA		1995	Brightman
68.0	214	130	42	354	PM	Tucannon River	Fair	1993	Slaybaugh/Lorentz
58.1	183	140	56	337	WW	Brock Meadows	Good	1994	Collar
54.9	172	144	68	333	WW	Lookingglass Creek	Good	2001	Mitchells/Collar
58.9	185	136	45	332	WW	Brock Meadows	Good	1994	Collar
57.2	180	128	44	319	WW	Thomas Creek	Good	1998	Berlier/Collar
47.2	148	108	104	282	WW	Lookout Mtn. BD Camp	Fair	2001	Berlier
50.0	157	108	63	281	WW	Hoodoo Ridge	Good	1993	Johnson
40.8	128	128	69	273	WW	Hoodoo Ridge	Good	1993	Johnson
40.6	128	125	43	263	HP	SF Big Wall Creek	Fair	1992	Fritz
39.4	124	90	50	226	NF	Desolation Creek	Fair	1991	Shirley

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DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
DOGWOOD, RED-OSIER (CORNUS SERICEA)									
10.2	32	13	48	57	NC	Blue Ridge Parkway, VA		2012	Salzer
DOUGLAS-FIR, ROCKY MTN. (PSEUDOTSUGA MENZIESII VAR. GLAUCA)									
38.2	208	120	43	339	NC	Coconino NF, AZ		2011	Williams
79.8	251	173	36	433	WC	Turkey Creek; PM RD	Good	1996	Tardif/Powell
88.5	278	106	53	397	OC	Crook County, OR		1994	Gannon
75.5	237	184	47	433	WW	Little Lookingglass Ck	Good	2002	Helmstetler/Bauwens
80.9	254	168	36	431	WW	Mottet Creek	Good	2001	Collar
69.9	219	188	43	418	WW	Sheep Creek	Fair	2003	Kaiser/Nelson
75.4	237	160	35	405	WW	Four Corners	Fair	2003	Collar
63.3	216	174	51	403	HP	Kahler Cr/Highway 207	Good	2011	Day
68.9	217	153	52	383	PM	Green Ridge	Good	1989	Tardif
63.6	200	168	31	376	HP	Bald Mountain	Good	1992	Fritz
59.3	186	178	37	374	HP	Martin Creek	Good	1995	Fritz
60.0	188	170	32	366	WW	Upper Brock Meadow	Good	2001	Collar
54.5	171	180	35	360	HP	Texas Butte	Good	1992	Michael
61.3	193	156	37	358	HP	Swale Creek	Fair	1993	Fritz
71.6	225	118	42	353	NF	Lost Creek	Good	1995	McDonald
57.2	180	159	54	352	NF	Thompson Creek	Good	1991	Haselden/Hancock
63.5	200	138	43	348	WW	Jarboe Creek	Good	1998	Collar
53.5	168	170	30	346	HP	Texas Butte	Fair	1992	Michael
58.0	182	150	36	341	WW	Upper Summer Creek	Fair	2010	Mitchell
54.0	170	150	47	332	WW	Upper Summer Creek	Good	2010	Mitchell
56.2	177	126	44	314	WW	Walla Walla River	Good	1998	WW timber crew
ELDER, BLUE (SAMBUCUS CERULEA)									
43.3	136	30	38	176	NC	Porterville, CA		2005	Cowley
32.8	103	47	31	157	WC	Fort Walla Walla, WA		1993	Muse
33.4	105	41	31	154	OC	Curry County, OR		1997	Hoshall
16.5	52	34	28	93	WW	Eden	Good	1998	Berlier/Rencken
ELM, AMERICAN (ULMUS AMERICANA)									
103.1	324	111	79	455	NC	Iberville, LA		2010	Poche
67.5	212	120	83	353	OC	Union County, OR		1995	Murchison/Murchison
68.4	215	105	99	345	WC	Cicero, WA		1992	Brightman
FIR, GRAND (ABIES GRANDIS)									
52.5	165	178	27	350	NC	Lincoln, MT		2011	Lane and others
72.9	229	251	43	491	WC	Olympic Nat Park, WA		1988	Van Pelt
64.0	201	212	34	422	OC	Clackamas County, OR		1995	Anderson
75.0	236	200	48	448	PM	Green Ridge	Poor	1996	Tardif
71.3	224	194	41	428	NF	Bone Point	Dead	2000	Hagen/McDonald
70.2	220	194	47	426	WW	Little Lookingglass Ck	Good	2002	Helmstetler/Bauwens

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DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
81.1	255	152	35	416	WW	Little Lookingglass Ck	Fair	2001	Collar
83.2	261	140	55	415	WW	Mottet Creek	Poor	2000	Johnson
75.7	238	152	44	401	WW	Little Lookingglass Ck	Fair	2002	Helmstetler/Bauwens
61.9	194	195	38	399	WW	Little Lookingglass Ck	Fair	2011	Meredith/Mitchell/Collar
73.6	231	132	46	375	WW	Little Lookingglass Ck	Poor	2001	Collar
56.9	179	176	48	367	WW	Bobsled Ridge	Fair	1999	Kaiser
56.6	178	160	46	350	WW	Bobsled Ridge	Good	1999	Kaiser
63.8	200	133	39	343	WW	Swamp Creek	Fair	2012	Henjum/Justice/Powell
57.1	179	146	35	334	HP	Swale Creek	Fair	1994	Fritz
55.4	174	143	25	323	HP	Indian Creek	Fair	1993	Fritz
57.8	181	133	23	320	WW	Johnson Creek	Good	2003	Maier
60.2	189	117	29	313	HP	Colvin Creek	Poor	2011	Day
50.6	159	134	33	301	HP	Tamarack Spring	Good	1993	Fritz

FIR, SUBALPINE (ABIES LASIOCARPA)

80.2	252	130	26	389	NC	Olympic NP, WA		1965	Arno/Sedergren
48.0	151	121	26	279	OC	Sheep Creek (WW RD)	Fair	2000	WW Timber Crew
34.5	108	153	25	268	PM	Turkey Creek	Good	1992	Tardif
35.2	111	90	21	206	WW	Balloon Tree	Good	2010	Collar/Monize
40.0	126	60	36	195	PM	Godman Ridge	Poor	1989	Tardif
26.5	83	102	21	191	HP	Potamus Creek	Good	1993	Fritz
22.8	72	88	16	164	HP	Potamus Creek	Good	1993	Fritz

HAWTHORNE, BLACK (CRATAEGUS DOUGLASII)

26.7	84	45	42	140	NC	Liberty, WA		2009	Trainer
36.3	114	33	45	158	OC	Multnomah County, OR		1973	Callahan
11.6	36	40	30	84	WW	Lookingglass Creek	Fair	2001	Powell

HAZEL, CALIFORNIA (CORYLUS CORNUTA VAR. CALIFORNICA)

23.9	75	46	52	134	NC	Lincoln County, OR		1993	Morgan
9.5	30	41	51	84	WC	Seattle, WA		1990	Van Pelt
23.9	75	46	52	134	OC	Lincoln County, OR		1993	Morgan

JUNIPER, WESTERN (JUNIPERUS OCCIDENTALIS)

153.1	481	78	56	573	NC	Stanislaus NF, CA		1940	Hall
73.8	236	84	48	332	OC	Lake County, OR		2009	Corbet
28.6	90	37	41	137	WC	North of Pasco, WA		1988	Van Pelt
62.7	197	65	51	275	EC	Mill Creek, Malheur NF	Good	2002	Collar
60.7	191	63	40	264	HP	Long Canyon	Fair	1992	Baker/Osmin
43.5	137	72	40	219	NF	Gilson Pond	Good	2004	McDonald
40.6	128	73	32	209	HP	Red Hill	Good	1991	Kenison
39.6	124	65	35	198	HP	Long Canyon	Good	1992	Baker
43.5	137	40	40	187	HP	Tamarack Mountain	Fair	1991	Walker
28.3	89	88	25	183	HP	Tamarack Spring (East)	Good	2000	Hancock

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
(INCLUDES 1989-2012 SUBMISSIONS)**

DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
32.6	102	65	33	176	NF	Frazier	Good	1997	Justice
32.5	102	60	20	167	HP	Potato Hill	Good	1992	Michael/Fox
40.0	126	27	26	159	NF	Warm Spring Creek	Good	1992	Hancock
33.6	106	40	34	154	HP	Sunflower Flat	Good	1998	King/Kaiser
34.9	110	35	24	151	HP	Sunflower Flat	Fair	1998	Kaiser/King
26.0	82	45	8	129	HP	Elder Flat	Fair	1992	Michael/Fox
20.9	66	38	25	110	PM	Tucannon River	Good	1990	Lorentz/Lydie

LARCH, WESTERN (LARIX OCCIDENTALIS)

84.0	264	153	34	426	NC	Missoula, MT		2011	Smith and Krebs
85.6	269	103	30	380	OC	Wallowa-Whitman NF		1995	Goodman
67.6	221	150	29	378	HP	Little Wilson Creek	Poor	2010	Spivey/Justice/Powell
54.5	171	192	38	373	PM	Green Creek	Good	1989	Tardif
58.0	182	178	34	369	HP	Swale Creek	Good	1995	Fritz
51.7	162	191	31	361	HP	Ditch Creek	Good	1993	Fritz
64.9	204	145	40	359	NF	Fivemile Creek	Good	1998	Ackerman/McFetridge
56.5	178	165	32	351	WW	Jarboe Creek/Brock Mead.	Fair	2012	Collars and Moniz
52.0	163	180	25	350	HP	Texas Butte	Good	1992	Michael
62.3	196	140	48	348	PM	Shoofly Spring	Good	2006	Mitchell/Mitchell
50.3	158	180	31	346	PM	Rainbow Creek RNA	Good	1989	Tardif
57.0	179	161	21	345	NF	Taylor Creek	Fair	1993	Hancock
62.1	195	141	29	343	NF	Warm Creek	Fair	1993	Hancock
66.3	208	120	20	333	WW	Jarboe Creek	Good	1993	Davis/Berlier
51.4	162	161	28	330	NF	Pearson Creek	Poor	1989	Robison
65.7	206	95	19	306	WW	Lookout Mountain	Poor	2010	WW presale crew
60.0	189	110	15	302	HP	Texas Butte	Fair	1992	Michael
48.1	151	135	25	292	WW	Jarboe Creek	Fair	2002	Mitchell

LOCUST, BLACK (ROBINIA PSEUDOACACIA)

59.8	188	98	54	300	NC	Cheshire, NH		1977	Stevens
77.3	243	95	76	357	WC	Auburn, WA		1987	Van Pelt
49.3	155	89	50	257	OC	Curry County, OR		1997	Miller

MAPLE, ROCKY MOUNTAIN (ACER GLABRUM)

34.7	109	71	57	194	NC	Guemes Island, WA		1997	Van Pelt/Brightman
13.4	42	63	26	112	OC	Hood River County, OR		1978	Foley
10.0	31	49	28	87	WW	Little Lookingglass Ck	Good	2002	Collar
8.9	28	47	23	80	WW	Finley Creek Cow Camp	Good	2002	Meredith/Berlier
11.2	35	36	25	77	WW	Kettleson Meadow	Good	2002	Collar
10.7	34	37	21	76	WW	Dry Creek	Fair	1992	Berlier
10.5	33	34	12	70	WW	Pedro Ridge	Poor	2000	Beall/Berlier
9.5	30	36	12	69	WW	Pedro Ridge	Fair	2000	Beall/Berlier
6.7	21	33	17	58	WW	Pedro Ridge	Good	2000	Beall/Berlier

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
(INCLUDES 1989-2012 SUBMISSIONS)**

DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
MOUNTAIN-ASH, GREENE (SORBUS SCOPULINA)									
7.6	24	14	20	43	NC	Spokane, WA		1993	Jacobson/Brightman
PINE, ROCKY MTN. LODGEPOLE (PINUS CONTORTA VAR. LATIFOLIA)									
42.3	133	156	37	298	NC	Valley County, ID		1980	Keaffer/McManus
47.1	148	125	53	286	OC	Klamath County, OR		1983	Brackett
50.0	157	43	44	211	WC	Olympic Nat. Park, WA		1980	Wood
40.7	128	110	47	250	NF	Desolation Meadow	Good	2000	McDonald
31.3	98	120	27	225	WW	Jarboe Meadows	Good	1994	Collar
36.6	115	97	30	220	NF	Desolation Meadow	Good	1994	McDonald
36.0	113	100	25	219	NF	Trout Meadows	Good	1993	McDonald
41.5	130	68	45	210	NF	Crane Flat	Good	1993	McDonald
31.2	98	106	8	206	WW	Bald Mountain	Good	2010	Borowski/Heaney/Tonn
38.8	122	71	40	203	NF	Crane Flat	Good	1993	McDonald
34.0	107	88	26	202	WW	South Fk. Wenaha River	Good	2001	Harshman
33.0	104	88	32	200	WW	Bear Creek	Good	1993	Roys/Berlier
31.0	97	90	28	194	WW	Bear Creek	Fair	1993	Roys/Berlier
30.1	95	95	19	194	WW	Lookout Mountain	Fair	1993	Westlund/Berlier
29.7	93	90	28	190	PM	Huckleberry Ridge	Good	1990	Lund/Young
34.4	108	68	42	187	PM	Maloney Mountain	Good	1989	Tardif
22.7	71	94	24	171	HP	Swale Creek	Good	1993	Fritz
20.7	65	95	15	164	HP	Mallory Creek	Fair	1998	Mullen
PINE, PACIFIC PONDEROSA (PINUS PONDEROSA VAR. PONDEROSA)									
103.1	324	235	66	575	NC	El Dorado, CA		2008	Errington & crew
108.9	342	178	45	531	OC	Deschutes County, OR		1992	Berrett
86.3	271	179	60	465	WC	Yakama Ind. Res., WA		1995	Van Pelt
81.1	255	152	89	429	NF	Bridge Cr. Wildlife Area	Good	2004	McDonald
70.2	221	168	40	399	WW	Finley Creek	Fair	2004	1991 marking crew
67.8	213	168	62	397	NF	Bridge Cr. Wildlife Area	Good	2004	McDonald
58.0	182	193	36	384	HP	Mulligan Stew Canyon	Good	2011	Day
54.6	172	192	57	378	HP	Walker Spring	Good	1992	Baker
58.5	184	184	35	377	PM	NF Asotin Creek	Good	1993	Stillman
53.4	168	190	68	375	HP	Walker Spring	Good	1992	Baker/Grabeel
63.1	198	164	45	374	HP	Bull Prairie	Good	1990	Spivey
53.0	167	190	35	365	HP	Texas Butte	Good	1992	Michael
62.5	196	150	50	359	PM	Curl Lake Canyon	Good	1989	Tardif
57.0	179	165	53	357	PM	NF Asotin Creek	Good	1993	Stillman
57.8	182	155	65	353	PM	Little Tucannon River	Good	1996	Tardif
60.4	190	140	65	346	HP	Wickiup Creek	Good	2010	Henjum
54.4	171	165	42	346	WW	Squaw Creek	Good	2000	Campbell/Berlier
57.4	180	151	48	343	PM	Horsethief Canyon	Good	1993	Stillman

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
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DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
PINE, WESTERN WHITE (PINUS MONTICOLA)									
103.1	324	117	55	455	NC	Alpine, CA		2009	Mahoney
79.3	249	242	35	500	OC	Jackson County, OR		1994	LaLande
62.1	195	192	37	396	WC	Alpine Lakes Wilderness		1988	Van Pelt
64.0	201	188	32	397	WW	Four Corners/6230 road	Good	2002	Denny/Collar
60.1	189	188	45	388	PM	Green Ridge	Good	1996	Tardif/Powell
63.1	198	176	21	380	PM	Rainbow Creek RNA	Poor	1989	Tardif
53.1	167	200	37	376	PM	Rainbow Creek RNA	Good	1989	Tardif
57.3	180	185	32	373	PM	Rainbow Creek RNA	Fair	1989	Tardif
57.3	180	173	23	358	WW	Little Lookingglass Ck	Good	2002	Collar
51.3	161	185	39	356	WW	Eden	Fair	2001	Paros
62.5	196	115	21	316	WW	Lookout Mountain	Fair	2001	Mitchell
45.5	143	146	31	297	WW	Jarboe Grade	Fair	2001	Campbell/Berlier
PINE, WHITEBARK (PINUS ALBICAULIS)									
85.3	268	65	27	340	NC	Sawtooth NF, ID		2007	Williams
71.3	224	74	65	314	OC	Wallowa County, OR		2008	Van Blaricom
63.7	200	67	51	280	WC	Alpine Lakes Wilderness		1988	Van Pelt
39.5	124	57	33	189	NF	Vinegar Hill	Good	1993	Davenport
18.5	58	31	12	92	NF	Portland Mine	Good	1993	McDonald
POPLAR, WHITE (POPULUS ALBA)									
81.5	256	68	70	342	NC	Charlevoix, MI		2005	Ehrle
68.8	216	90	92	329	WC	Allen, WA		1988	Van Pelt
71.6	225	53	70	296	OC	Clackamas County, OR		1995	Anderson
SAGEBRUSH, BIG (ARTEMISIA TRIDENTATA)									
9.5	30	15	15	49	NC	Jefferson County, OR		1995	Corbet
6.4	20	13	17	37	OC	Crooked River NG, OR		1995	Corbet
SERVICEBERRY, WESTERN (AMELANCHIER ALNIFOLIA)									
13.1	41	41	41	92	NC	Beacon Rock SP, WA		1993	Van Pelt
14.3	45	27	22	78	OC	Douglas County, OR		1975	Callahan
2.9	9	26	8	37	WW	Buck Creek/Kiwanis Cabin	Fair	2004	Powell/Rother
SPRUCE, ENGELMANN (PICEA ENGELMANNII)									
92.9	292	181	50	486	NC	Boise, ID		2005	Wagner/Myers
63.3	199	159	43	369	OC	Baker County, OR		1983	Wooldridge
67.5	212	190	26	409	WW	Little Lost Creek	Dead	1999	Chapman
46.9	147	207	36	363	PM	Green Creek	Fair	1996	Tardif/Powell
48.5	152	196	25	355	PM	Green Creek	Dead	1989	Lund/Tardif
56.3	177	168	30	352	WW	Eagle Creek	Poor	2003	Collar
47.9	151	192	29	350	PM	Green Creek	Fair	1996	Tardif/Powell
57.6	181	152	37	342	WW	Eagle Creek	Poor	2003	Collar
52.0	163	175	6	340	WW	Upper Summer Creek	Good	2010	Mitchell

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
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DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
47.5	149	180	28	336	PM	Meadow Creek	Good	1993	Tardif
53.5	168	154	29	329	WW	Spout	Good	2000	Beall/Berlier
51.5	162	155	36	326	HP	Shaw Creek	Good	1994	Fritz
52.3	164	135	39	309	WW	Jubilee Lake Overflow CG	Good	2001	Berlier/Frank
47.1	148	145	33	301	WW	Deadman Spring	Good	1995	Berlier
43.8	138	136	29	281	HP	Herren Meadow	Good	1993	Fritz
42.0	132	130	34	271	WW	Jarboe Creek	Good	2002	Mitchell

SUMAC, SMOOTH (RHUS GLABRA)

4.1	13	22	16	39	NC	Lexington, KY		2011	Olszowy
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WILLOW, ARROYO (SALIX LASIOLEPIS)

28.3	89	41	49	142	NC	San Juan Capistrano, CA		2003	Cowley
13.7	43	27	20	75	OC	Wallowa County, OR		1975	Callahan

WILLOW, BEBB (SALIX BEBBIANA)

42.6	134	44	48	190	NC	New London, CT		2012	Kaputa
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WILLOW, DUSKY (SALIX MELANOPSIS)

NC No champion as of 2012

WILLOW, PACIFIC (SALIX LUCIDA SSP. LASIANDRA)

NC No champion as of 2012

40.4	127	40	67	184	WC	Auburn, WA		1993	Brightman
26.7	84	61	40	155	OC	Lincoln County, OR		1995	Anderson

WILLOW, PEACHLEAF (SALIX AMYGDALOIDES)

NC No champion as of 2012

90.4	284	67	80	371	OC	Union County, OR		1975	Callahan
30.6	96	56	95	176	WC	Whitman Mission, WA		1993	Brightman/Van Pelt

WILLOW, SANDBAR (SALIX EXIGUA)

NC No champion as of 2012

WILLOW, SCOULER (SALIX SCOULERANA)

47.4	149	66	54	229	NC	Maury Island, WA		1995	Van Pelt/Brightman
55.7	175	50	43	236	WC	Winslow, WA		1995	Brightman
24.3	76	30	29	114	WW	Sinks	Good	2002	Collar
25.9	81	27	18	113	NF	Lynch Meadows	Poor	1999	McDonald (Evan)
23.9	75	28	22	109	NF	Bone Point	Fair	1997	McDonald
18.1	57	26	17	87	WW	Balloon Tree	Poor	2011	Peterson/Meredith
18.8	59	24	17	87	WW	Bobsled Ridge	Fair	1999	Kaiser
16.9	53	23	26	83	HP	Squaw Creek Area	Fair	1993	Lacey
7.7	24	38	15	66	NF	Sheep Rock	Fair	1993	McDonald
7.2	23	23	17	50	WW	Middle Ridge/Rd. 3734	Good	2000	Beall/Berlier

**BIG TREE REGISTER FOR THE UMATILLA NATIONAL FOREST
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DBH	CIRC	HGT	SPD	SCORE	RD	LOCATION	COND	YEAR	NOMINATOR
WILLOW, SITKA (SALIX SITCHENSIS)									
					NC	No champion as of 2012			
70.0	220	50	52	283	OC	Lincoln County, OR		1993	Morgan
WILLOW, YELLOW (SALIX LUTEA)									
5.4	17	14	12	34	NC	Coconino NF, AZ		2007	Thornburg/Allgood
YEW, PACIFIC (TAXUS BREVIFOLIA)									
57.3	180	54	30	242	NC	Mineral, WA		1959	Malcomb & others
51.6	162	65	35	236	OC	Washington County, OR		2007	Matthews
22.4	70	39	28	116	PM	Panjab Creek Trailhead	Good	1993	Coleman/Whittaker
19.8	62	27	31	97	WW	Coyote Creek	Good	1993	Collar
21.4	67	22	22	95	WW	Bobsled Ridge	Fair	1999	Kaiser
18.2	57	28	31	93	WW	Coyote Creek	Good	1993	Collar
16.6	52	35	23	93	WW	Umatilla Forks CG	Good	2000	Torretta/Berlier
17.2	54	26	27	87	WW	Coyote Creek	Good	1993	Collar
15.3	48	33	20	86	PM	Coombs Canyon	Good	1992	Tardif
13.0	41	29	41	80	HP	Big Wall Creek	Good	1991	Correa
12.0	38	32	27	77	WW	Jarboe	Good	2001	Berlier
11.6	36	33	20	74	HP	Coffeepot Spring	Good	1993	Fritz
11.2	35	30	17	69	HP	Coffeepot Spring	Good	1993	Fritz
12.1	38	24	22	68	WW	Buzzard Creek	Good	2001	Darrach

TABLE COLUMN DESCRIPTION

<u>HEADING</u>	<u>DESCRIPTION</u>
DBH	Diameter at breast height (4½ feet), in inches (if not provided, calculate it: circumference ÷ 3.1416 = DBH).
Circ	Circumference (if not provided, calculate it: DBH × 3.1416 = circumference).
Hgt	Total tree height, in feet.
Spd	Crown spread, in feet (average of maximum and minimum crown widths).
Score	Total score, calculated this way: ¼ of crown spread + height + circumference.
RD	Codes designating the Ranger District on which the tree is found, along with national and state champion tree designations, as follows: HP: Heppner Ranger District of the Umatilla National Forest; NF: North Fork Ranger District of the Umatilla National Forest; PM: Pomeroy Ranger District of the Umatilla National Forest; WW: Walla Walla Ranger District of the Umatilla National Forest; NC: National Champion; OC: Oregon Champion; WC: Washington Champion.
Location	Place name referencing a drainage, ridge, or other geographic landmark.
Cond	Tree condition (good, fair, poor).
Year	Year in which the tree was submitted.
Nominator	Person(s) who measured and nominated the tree for the register.

APPENDIX: SILVICULTURE WHITE PAPERS

White papers are internal reports, and they are produced with a consistent formatting and numbering scheme – all papers dealing with Silviculture, for example, are placed in a silviculture series (Silv) and numbered sequentially. Generally, white papers receive only limited review and, in some instances pertaining to highly technical or narrowly focused topics, the papers may receive no technical peer review at all. For papers that receive no review, the viewpoints and perspectives expressed in the paper are those of the author only, and do not necessarily represent agency positions of the Umatilla National Forest or the USDA Forest Service.

Large or important papers, such as two papers discussing active management considerations for dry and moist forests (white papers Silv-4 and Silv-7, respectively), receive extensive review comparable to what would occur for a research station general technical report (but they don't receive blind peer review, a process often used for journal articles).

White papers are designed to address a variety of objectives:

- (1) They guide how a methodology, model, or procedure is used by practitioners on the Umatilla National Forest (to ensure consistency from one unit, or project, to another).
- (2) Papers are often prepared to address ongoing and recurring needs; some papers have existed for more than 20 years and still receive high use, indicating that the need (or issue) has long standing – an example is white paper #1 describing the Forest's big-tree program, which has operated continuously for 25 years.
- (3) Papers are sometimes prepared to address emerging or controversial issues, such as management of moist forests, elk thermal cover, or aspen forest in the Blue Mountains. These papers help establish a foundation of relevant literature, concepts, and principles that continuously evolve as an issue matures, and hence they may experience many iterations through time. [But also note that some papers have not changed since their initial development, in which case they reflect historical concepts or procedures.]
- (4) Papers synthesize science viewed as particularly relevant to geographical and management contexts for the Umatilla National Forest. This is considered to be the Forest's self-selected 'best available science' (BAS), realizing that non-agency commenters would generally have a different conception of what constitutes BAS – like beauty, BAS is in the eye of the beholder.
- (5) The objective of some papers is to locate and summarize the science germane to a particular topic or issue, including obscure sources such as master's theses or Ph.D. dissertations. In other instances, a paper may be designed to wade through an overwhelming amount of published science (dry-forest management), and then synthesize sources viewed as being most relevant to a local context.
- (6) White papers function as a citable literature source for methodologies, models, and procedures used during environmental analysis – by citing a white paper, specialist reports can include less verbiage describing analytical databases, techniques, and so forth, some of which change little (if at all) from one planning effort to another.
- (7) White papers are often used to describe how a map, database, or other product was developed. In this situation, the white paper functions as a 'user's guide' for the new product. Examples include papers dealing with historical products: (a) historical fire extents for the Tucannon watershed (WP Silv-21); (b) an 1880s map developed from General Land Office survey notes (WP Silv-41); and (c) a description of historical mapping sources (24 separate items) available from the Forest's history website (WP Silv-23).

The following papers are available from the Forest's website: [Silviculture White Papers](#)

Paper #	Title
1	Big tree program
2	Description of composite vegetation database
3	Range of variation recommendations for dry, moist, and cold forests
4	Active management of dry forests in the Blue Mountains: silvicultural considerations
5	Site productivity estimates for upland forest plant associations of the Blue and Ochoco Mountains
6	Fire regimes of the Blue Mountains
7	Active management of moist forests in the Blue Mountains: silvicultural considerations
8	Keys for identifying forest series and plant associations of the Blue and Ochoco Mountains
9	Is elk thermal cover ecologically sustainable?
10	A stage is a stage is a stage...or is it? Successional stages, structural stages, seral stages
11	Blue Mountains vegetation chronology
12	Calculated values of basal area and board-foot timber volume for existing (known) values of canopy cover
13	Created opening, minimum stocking level, and reforestation standards from the Umatilla National Forest land and resource management plan
14	Description of EVG-PI database
15	Determining green-tree replacements for snags: a process paper
16	Douglas-fir tussock moth: a briefing paper
17	Fact sheet: Forest Service trust funds
18	Fire regime condition class queries
19	Forest health notes for an Interior Columbia Basin Ecosystem Management Project field trip on July 30, 1998 (handout)
20	Height-diameter equations for tree species of the Blue and Wallowa Mountains
21	Historical fires in the headwaters portion of the Tucannon River watershed
22	Range of variation recommendations for insect and disease susceptibility
23	Historical vegetation mapping
24	How to measure a big tree
25	Important insects and diseases of the Blue Mountains
26	Is this stand overstocked? An environmental education activity
27	Mechanized timber harvest: some ecosystem management considerations
28	Common plants of the south-central Blue Mountains (Malheur National Forest)
29	Potential natural vegetation of the Umatilla National Forest
30	Potential vegetation mapping chronology
31	Probability of tree mortality as related to fire-caused crown scorch
32	Review of the "Integrated scientific assessment for ecosystem management in the interior Columbia basin, and portions of the Klamath and Great basins" – forest vegetation
33	Silviculture facts
34	Silvicultural activities: description and terminology
35	Site potential tree height estimates for the Pomeroy and Walla Walla ranger districts
36	Tree density protocol for mid-scale assessments
37	Tree density thresholds as related to crown-fire susceptibility

Paper #	Title
38	Umatilla National Forest Land and Resource Management Plan: forestry direction
39	Updates of maximum stand density index and site index for the Blue Mountains variant of the Forest Vegetation Simulator
40	Competing vegetation analysis for the southern portion of the Tower Fire area
41	Using General Land Office survey notes to characterize historical vegetation conditions for the Umatilla National Forest
42	Life history traits for common conifer trees of the Blue Mountains
43	Timber volume reductions associated with green-tree snag replacements
44	Density management field exercise
45	Climate change and carbon sequestration: vegetation management considerations
46	The Knutson-Vandenberg (K-V) program
47	Active management of quaking aspen plant communities in the northern Blue Mountains: regeneration ecology and silvicultural considerations
48	The Tower Fire...then and now. Using camera points to monitor postfire recovery
49	How to prepare a silvicultural prescription for uneven-aged management
50	Stand density conditions for the Umatilla National Forest: a range of variation analysis
51	Restoration opportunities for upland forest environments of the Umatilla National Forest
52	New perspectives in riparian management: Why might we want to consider active management for certain portions of riparian habitat conservation areas?
53	Eastside Screens chronology
54	Using mathematics in forestry: an environmental education activity
55	Silviculture certification: tips, tools, and trip-ups
56	Vegetation polygon mapping and classification standards: Malheur, Umatilla, and Wallowa-Whitman national forests
57	The state of vegetation databases on the Malheur, Umatilla, and Wallowa-Whitman national forests

REVISION HISTORY

November 2012: Since its inception in March of 1990, this white paper has been revised more than a dozen times, but no specific revision history was maintained because a 'revision history' convention was not instituted until the Umatilla National Forest developed a new white-paper protocol in late 2011. For the November 2012 version, formatting and editing changes were made, and the Big Tree Register was revised.